

Amendments to the Claims:

A listing of the entire set of pending claims (including amendments to the claims, if any) is submitted herewith per 37 CFR 1.121. This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1. (Currently Amended) Integrated circuit, comprising:

a plurality of processing modules (M, S), wherein at least one first of said processing modules (M) requests at least one communication service to at least one second processing module (S) based on specific communication properties and at least one communication service identification,

an interconnect means (N) for coupling said plurality of processing modules (M, S) and for enabling a connection based communication having a set of connection properties,

at least one network interface (NI) associated to said at least one first of said processing modules for controlling the communication between said at least one first of said plurality of processing modules (M) and said interconnect means (N), and

a mapping means (A) for mapping the requested at least one communication service based on said specific communication properties to a connection based on a set of connection properties according to said at least one communication service identification, wherein said at least one communication service identification comprises at least one communication thread or at least one address range, said address range for identifying one or more second processing modules (S) or a memory region within said one or more second processing modules (S).

2. (Original) Integrated circuit according to claim 1, wherein said mapping means (A) is arranged in said at least one network interface (NI).

3. (Currently Amended) Integrated circuit according to claim 1, ~~wherein said communication service identification comprises at least one communication thread~~, wherein said at least one communication thread is mapped to at least one connection based on a set of connection properties.

4. (Original) Integrated circuit according to claim 1, ~~wherein said communication service identification comprises at least one address range in said at least one second processing module (S),~~ wherein said at least one address range is mapped to at least one connection based on a set of connection properties.

5. (Original) Integrated circuit according to claim 3, wherein said communication service identification further comprises at least one address range in said at least one second processing module (S), wherein said at least one address range is mapped to at least one connection based on a set of connection properties.

6. (Currently Amended) Method of communication service mapping in an integrated circuit, having a plurality of processing modules (M, S), wherein at least one first of said processing modules (M) requests at least one communication service to at least one second processing module (S) based on specific communication properties and at least one communication service identification, wherein said at least one communication service identification comprises at least one communication thread or at least one address range, said address range for identifying one or more second processing modules (S) or a memory region within said one or more second processing modules (S). comprising the steps of:

coupling said plurality of processing modules (M, S) by an interconnect means (N)
and

enabling a connection based communication having a set of connection properties,
controlling the communication between said at least one first of said plurality of processing modules (M) and said interconnect means (N) by at least one network interface (NI) associated to said at least one first of said processing modules,

mapping the requested at least one communication service based on said specific communication properties to a connection based on a set of connection properties according to said at least one communication service identification.

7. (Currently Amended) Data processing system, comprising

a plurality of processing modules (M, S), wherein at least one first of said processing modules (M) requests at least one communication service to at least one second processing module (S) based on specific communication properties and at least one communication service identification, wherein said at least one communication service identification comprises at least one communication thread or at least one address range, said address range for identifying one or more second processing modules (S) or a memory region within said one or more second processing modules (S).

an interconnect means (N) for coupling said plurality of processing modules (M, S) and for enabling a connection based communication having a set of connection properties, at least one network interface (NI) associated to said at least one first of said processing modules for controlling the communication between said at least one first of said plurality of processing modules (M) and said interconnect means (N), and

a mapping means (A) for mapping the requested at least one communication service based on said specific communication properties to a connection based on a set of connection properties according to said at least one communication service identification.